

IN THE CLAIMS:

Amend claim 9 as shown in the following listing of claims, which replaces all previous listings and versions of claims.

1. (previously presented) A gas compressor comprising:

a compressor main body which sucks, compresses, and discharges refrigerant gas, and an oil sump which stores oil for lubricating the compressor main body, the compressor main body being composed of a cylinder, side blocks disposed at axial ends of the cylinder, a rotor rotatably mounted to undergo rotation in the cylinder, vane grooves extending inwardly from an outer peripheral surface of the rotor toward an inner periphery thereof, and vanes slidably in respective ones of the vane grooves for slidably advancing and retracting during rotation of the rotor;

a back pressure space including bottom portions of the vane grooves and attaining a middle pressure between a suction pressure and a discharge pressure during normal operation of the compressor main body;

a first high pressure oil passage establishing communication between the oil sump and the vane groove bottom portions when the vanes are at their discharge stroke positions;

a second high pressure oil passage establishing communication between the oil sump and the back pressure space; and

an opening/closing valve for opening and closing the second high pressure oil passage.

2. (previously presented) A gas compressor according to claim 1; wherein the opening/closing valve keeps the second high pressure oil passage open when the rotation of the rotor is at rest, closes the second high pressure oil passage when the rotor starts rotation, and keeps the second high pressure oil passage closed during normal operation of the compressor.

3. (previously presented) A gas compressor according claim 1; wherein the opening/closing valve keeps the second high pressure oil passage closed during normal operation of the compressor and keeps the second high pressure oil passage open when the compressor is not performing normal operation and the oil pressure is low.

4. (previously presented) A gas compressor according to claim 1; wherein the back pressure space has a flat groove communicating with the vane groove bottom portions when the vanes are at their positions in transition from suction stroke to compression stroke, and the vane groove bottom portions communicate with the first high pressure oil

passage after the communication between the flat groove and the vane groove bottom portions is interrupted.

5. (previously presented) A gas compressor according to claim 1; wherein a downstream end portion of the second high pressure oil passage opens into the vane groove bottom portions when the vanes are situated at their discharge stroke positions.

6. (previously presented) A gas compressor according to claim 4; wherein a downstream end portion of the second high pressure oil passage opens into the flat groove.

7. (previously presented) A gas compressor according to claim 1; wherein the opening/closing valve is movably arranged so as to open and close the second high pressure oil passage and has a valve element situated at a position where the valve element closes the second high pressure oil passage and an elastic member for imparting an elastic force to the valve element to place the valve element at a position where the valve element opens the second high pressure oil passage, the valve element moving under a pressure of high pressure oil to a position where the valve element closes the second high pressure oil passage during normal operation of the compressor and moving to a position where the valve element opens the second high pressure oil passage by the elastic force of the elastic member when the

pressure of the high pressure oil is lowered.

8. (previously presented) A gas compressor according to claim 7; wherein a differential pressure of the high pressure oil to which the discharge pressure in the compressor is imparted and middle pressure oil is applied to the valve element.

9. (currently amended) A gas compressor comprising: a housing having an oil sump for storing oil and supplying oil under pressure during use of the gas compressor; a cylinder disposed in the housing and having a generally elliptical inner peripheral surface; a rotationally driven rotor rotatably disposed in the cylinder; vane grooves formed in the rotor and extending inwardly from an outer peripheral surface of the rotor; vanes slidably disposed in respective ones of the vane grooves and cooperating with the inner peripheral surface of the cylinder and the outer peripheral surface of the rotor to define compression chambers for intaking a gas, compressing the gas and discharging compressed gas during rotation of the rotor; means including bottom portions of the vane grooves for defining a back pressure space; a first high pressure oil passage establishing communication between the oil sump and the vane groove bottom portions when the vanes are at their discharge stroke positions; a second high pressure oil passage establishing communication between the

oil sump and the back pressure space; and a valve that opens the second high pressure oil passage during periods of start-up and low speed operation of the gas compressor and closes the second high pressure oil passage during periods of normal speed operation of the gas compressor.

10. (previously presented) A gas compressor according to claim 9; wherein the back pressure space comprises a flat groove that communicates with the bottom portions of the vane grooves when the vanes are at their positions in transition from suction stroke to compression stroke, and the bottom portions of the vane grooves communicate with the first high pressure oil passage after the communication between the flat groove and the vane groove bottom portions is interrupted.

11. (previously presented) A gas compressor according to claim 10; wherein a downstream end portion of the second high pressure oil passage opens into the vane groove bottom portions when the vanes are situated at their discharge stroke positions.

12. (previously presented) A gas compressor according to claim 11; wherein a downstream end portion of the second high pressure oil passage opens into the flat groove.

13. (previously presented) A gas compressor according to claim 10; wherein a downstream end portion of the second high pressure oil passage opens into the flat groove.

14. (previously presented) A gas compressor according to claim 9; wherein a downstream end portion of the second high pressure oil passage opens into the vane groove bottom portions when the vanes are situated at their discharge stroke positions.

15. (previously presented) A gas compressor according to claim 9; wherein the back pressure space comprises a flat groove that communicates with the bottom portions of the vane grooves when the vanes are at their positions in transition from suction stroke to compression stroke, and a downstream end portion of the second high pressure oil passage opens into the flat groove.

16. (previously presented) A gas compressor according to claim 9; wherein the valve comprises a pressure-responsive valve movable to a first position to close the second high pressure oil passage during periods of normal speed operation of the gas compressor when the differential pressure of oil supplied from the oil sump and oil in the back pressure space is greater than a certain level and movable to a second position to open the second high pressure oil passage during periods of start-up and low speed operation of the gas

compressor when the differential pressure of oil supplied from the oil sump and oil in the back pressure space is less than the certain level.

17. (previously presented) A gas compressor according to claim 16; wherein the pressure-responsive valve comprises a valve spool element movable between the first and second positions, a spring that urges the valve spool element toward the second position, and means for applying the differential pressure to opposite ends of the valve spool element.